GERMAN OIL SHALE EXPLOITATION AND PRODUCTION IN FRANCE DURING WW II

The information in this document was in the form of correspondence, usually between the economic division of the Security Service (Sicherheitsdienst) and the Office of the Military Commander for France).

1. The procedure in determining whether an oil shale deposit would be profitable to exploit and the procedure for actual exploitation consisted generally of the following steps:

a. Report that a deposit exists in a particular region.

b. Chemical analysis of shale to indicate percentage of oil yield.

c. Decision as to whether yield is sufficient to warrent tying up materials and equipment. French companies contacted.

d. Production schedule prepared for expected oil yield.

e. Reports of actual production.

f. Continual efforts to increase production further. French companies contacted.

Due to a shortage of raw materials and equipment, it was decided that preferably only oil shale deposits yielding a minimum of 7 percent oil would be exploited.

2. Report on inspection of Autun mines, operated by the Shale Mining Company of Lyon (13 March 1941).

This report states that the company has innumerable financial difficulties, which have prevented the introduction of modern exploitation methods. A shortage of crude oil prevents an increase in production. German financial assistance and help in modernization would be needed to alleviate the "tragic" conditions found at this mine (poor working conditions for the miners, lack of trained personnel, high interest rates based on pre-war import conditions, improper allocation of the labor forces on hand), which result in the low output of 400 tons of shale daily, which is but two-thirds of 1936-37 production. The potential high yield from this deposit would justify such investment by the Germans.

Although the exploitation of the working potential of the miners is at its lowest possible level at this mine, improvement of the working conditions and rational utilization of the existing manpower could bring production up to 1,000 tons of shale daily. With the addition of improved technical facilities, production could possibly be brought up to 5,000 tons of shale daily.

3. The oil shale deposits at Creveney (Savoy) would yield 4 to 6 percent oil. (29 Oct 1942). Since the deposit has not been worked since 1936, when the exploiting company went bankrupt, the Germans did not find it expedient to re-initiate production at this time, due to a lack of materials needed for operation. The Germans felt it better to allocate materials and equipment to the better-yielding deposits, such as Autun.

4. A report on an oil shale deposit in St. Denis (2 June 1942) indicates an oil yield of 1½ to 3 percent; analyses conducted show that 1 ton of oil shale would yield 15.2 kilograms of medium oil.

5. The St. Hilaire deposits, southwest of Moulin, provide low-grade coal as well as oil shale. The daily output amounts to 100 tons of shale and 20 tons of coal. The oil content of the shale is about 6½ percent. According to the management, the workers intentionally injure themselves, as arbitrary absenteeism carries fines. As a result, absenteeism totals 15 percent.

6. Deposits of oil shale at Vagnas, Severac, Gaujacq and Bastennes, Boson, and Manosque also are reported.

7. General information (July 1942):

Too many individual plans and surveys for oil shale exploitation have been duplicated by various organizations. It is therefore planned that a central office in Berlin be opened to coordinate the oil shale exploitation.

In order to accelerate the /liquid/ fuel production in France by at least 30 percent in the shortest time possible, and in view of the existing labor shortage, the French Committee for Combustible Solid

Minerals has found it necessary to request that the French Bedaux Company offer its system to the government without commercial benefit. Transfer of its personnel to the various mines to introduce the system likewise has been asked. The company disagreed, but proposed instead that a Bedaux school be set up at one of the mines and that Bedaux engineers teach the method to people sent there from other firms. The plan was accepted, but various difficulties developed. Rivalry on the part of other companies against the Bedaux Company, which wanted to benefit commercially by the Bedaux process, arose; moreover, the Autun company refused to accept Bedaux engineers. The election of a former Bedaux engineer as head of the committee to organize labor further complicated the matter, as he refused to contribute to anything which might benefit the Germans. All these difficulties resulted in failure of the end in view, namely the acceleration of production, and succeeded instead in preventing the Bedaux Company from instituting its production process, which had proved so successful in Algeria.

8. A report on the results of the Bedaux system introduced at Autun indicates that production of the two control groups increased by 40 percent, unit production costs decreased by 16.6 percent, and wages increased by 32 percent and 13 percent. New wage laws are badly needed to permit granting workers increases for accelerated production. It should be possible to increase wages at all times when unit costs decrease, accompanied by increased production.

9. A report of an official inspection of the Autun deposit, dated 3 Aug 1942 /It is the opinion of the exploiter of the German-language document that this date is in error and should read 3 Aug 1943/ states that four installations are in operation there now, the fourth just having been opened. A yield of 250 tons of oil shale daily is expected. The furnace principle, as opposed to the Pumpnerston method, has been applied here for the first time. Some difficulties have developed. It is not to be feared that the furnace, due to its overly broad chamber, is of faulty design. It is doubtful that the Fischer process will yield

100 percent production capacity. Production so far has reached up to 150 tons daily. 250 tons daily is expected six weeks from now.

10. A letter dated 27 Aug 1943 sent by the French Bureau of Mines tries to explain the decreased output of the mines: Reasons:

a. Installation of new furnace system has caused mechanical disturbances expected to be overcome in the next few months.

b. Furnace type No. 4 has shown faulty design, and will have to be redesigned. This cannot be accomplished before early 1944.

c. Lack of fuel, resulting in shortage of steam, so that steam furnaces of latest design have been idle at times. Steam consumption under strict observation and kept at minimum.

d. Systematic error in measuring the quantities of shale due to new method of introducing the material into the upper part of the furnace.

e. The quality of the shale has decreased.

The construction of mine shafts has been slowed down due to cement shortage.

11. On 26 Aug 1943, 10 armed terrorists raided the installations at Autun at night, dynamiting furnace installations. Minor damage to the factory resulted. Increase of local French police guards not possible due to personnel shortage. German guards not used in order to prevent conscious realization that the French workers are producing for the German war effort. German guards are also impractical because the Sicherheitsdienst does not want to stress the importance of mining operations in the eyes of the populace. French guards are armed only with sticks.

12. In the period around October 1943, a bottleneck in the crude oil production necessitated planning for the exploitation of all possible deposits. Oil shale deposits in the Baltic countries was considered. No estimates for possible output could be made due to the military situation. The location of these deposits was found to be but 100

kilometers behind the front lines, which would necessitate special measures in case of retreat. Steel shortage makes procurement of equipment difficult.

One of the companies reports that although the materials to start production have arrived, the requisition of skilled workers has not yet been filled.

Organisation Todt took over the Gabian oilfields and confiscated its total oil production of 50 tons monthly. The French have complained that this upsets their distribution plans. It has been found out, however, that this oil has previously been sold on the black market, which fact resulted in the move.

Organisation Todt complains about the incompetent expert supposed to supervise production at Vagnes.

German officials complain that production facilities of Eastern Europe receive a higher priority than the production facilities of Western Europe.

13. The shortage of petroleum engineers resulted in a directive by Hitler himself that combat units release qualified personnel. The directive was ineffective, as they were nearly all killed. Out of 150 available mining and petroleum engineers, 100 had been killed in combat. A training course for petroleum engineers will start on 1 October 1943. Of 25 expected trainees, 16 arrived and the rest had been killed in the meantime.

/There is a vast amount of information in this document about the nature of the various French deposits of oil shale and the measures considered for the possible exploitation of these deposits. However, in view of the relatively short time available for the preparation of this survey, it has been impossible to devote the time and the means the document probably deserves./